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(54) DUST CORE FOR HIGH FREQUENCY AND MANUFACTURING METHOD
THEREFOR

(57)Abstract:

PROBLEM TO BE SOLVED: To solve the problem where breakage and exfoliation are generated in an insulating covering layer and desired characteristic is not obtained, when a core is molded in high density in order to correspond to miniaturization of a device by improving characteristics of the dust core, which is formed by molding ferromagnetic metal powder whose surface is covered with an insulating material to realize high magnetic flux density, high permeability, low iron loss and high strength, so as to obtain a dust core superior in both magnetic characteristics and strength.

SOLUTION: In a mixed powder, an inorganic insulating material and an organic insulating material which serves as binder are mixed in ferromagnetic metal powder by a volume ratio that the total of this materials is 1-6% (in which ratio of the inorganic insulating material is 0.5-5.5%). The mixed powder is subjected to

fusing treatment, where strong compressing and shearing action is applied mechanically and repeatedly. Since obtained covering layers are bonded stiffly to inner powder, breakage and exfoliation are not generated when high pressure molding is performed, and a dust core superior in both magnetic characteristics and strength is obtained.